CLAIMS

1. Use as an anti-cancer agent of a mutant herpes simplex virus type HSV-1 wherein the mutant virus is a mutant strain 17 virus and comprises a modification in the γ34.5 gene in the long repeat region (R_L) such that the γ34.5 gene is non-functional.

2. Use of a mutant herpes simplex virus according to claim 1 wherein the virus is substantially non-neurovirulent.

3. Use of a mutant herpes simplex virus according to any preceding claim wherein the modification to the virus is made within the Bam H1 s restriction fragment of the R_L terminal repeat.

4. Use of a mutant herpes simplex virus according to claim 3 wherein the modification is a deletion of from 0.1 to 3kb, in particular of from 0.7 to 2.5 kb.

5. Use of a mutant herpes simplex virus according to claim 4 wherein the deletion is a 759 bp deletion in the γ34.5 gene.

6. Use of a mutant herpes simplex virus according to any of the preceding claims as an anti-brain tumour agent.

7. Use of a mutant herpes simplex virus according to claim 6 against primary tumours originating within the brain and nervous system.

8. Use of a mutant herpes simplex virus according to claim 6 against metastatic tumours, in particular against metastases of melanoma cancers.

9. Use of a mutant herpes simplex virus according to any of the preceding claims wherein the use is in a mammal, in particular in a human.

10. Use according to any of the preceding claims wherein the mutant herpes simplex virus is mutant 1716.

11. Use as an anti-cancer agent of a mutant herpes simplex virus type HSV-1 wherein the mutant virus comprises a modification in the γ34.5 gene in the long repeat region (R_L) such that the γ34.5 gene is non-functional; the anti-cancer use being in respect of cancer of the central nervous system including the brain, the cancer being a secondary metastatic tumour.

12. Use of a mutant herpes simplex virus according to any preceding claim in the manufacture of a medicament for the treatment of cancer in mammals, in particular in humans.

13. Use of a mutant herpes simplex virus according to claim 12 in the manufacture of a medicament for the treatment of brain tumours in mammals, in particular in humans.

14. Use of a mutant herpes simplex virus according to claim 12 or claim 13 in the manufacture of a medicament for the treatment of primary tumours originating within the brain and/or nervous system.

15. Use of a mutant herpes simplex virus according to any of claims 12 to 14 in the manufacture of a medicament for the treatment of metastatic tumours, in particular against metastases of melanoma cancers.

16. A method of treating cancer in mammals, in particular in humans by administering a pharmaceutical formulation comprising a mutant herpes simplex virus type HSV-1 wherein the mutant virus is a mutant strain 17 virus and comprises a modification in the γ34.5 gene in the long repeat region (R_L) such that the γ34.5 gene is non-functional.

17. A method of treating cancer in mammals, in particular in humans according to claim 16 by administering a pharmaceutical formulation directly into the tumour.

M 19.08.96

18. A method of treating cancer in mammals, in particular in humans according to claim 16 by administering a pharmaceutical formulation parenterally into the blood stream feeding the tumour.

19. A method of treating cancer in mammals, in particular in humans, by administering a pharmaceutical formulation comprising a mutant herpes simplex virus type HSV-1 wherein the mutant virus comprises a modification in the γ34.5 gene in the long repeat region (R_L) such that the γ34.5 gene is non-functional; the cancer being a cancer of the central nervous system including the brain which is a secondary metastatic cancer tumour.

add a'

add B8